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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/002,141 | 12/05/2001 | Alexander Beeck | 033275-316 | 3862 |

7590 12/18/2007
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| EXAMINER |
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WIEHE, NATHANIEL EDWARD

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| ART UNIT | PAPER NUMBER |
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3745

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| MAIL DATE | DELIVERY MODE |
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12/18/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

| | | | |
|------------------------------|-------------------------------|------------------------------|--|
| Office Action Summary | Application No. 10/002,141 | Applicant(s) BEECK ET AL. | |
| | Examiner Nathan Wiehe | Art Unit 3745 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 31 October 2007.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 6, 13 and 22-28 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 6, 13 and 22-28 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 31 October 2007 has been entered.

Response to Arguments

Applicant's arguments filed 31 October 2007 have been fully considered but they are not persuasive. Applicant contends that Yamarik does not disclose that the tip cooling hole are dimensioned are oriented to enable the introduction of a borescope there through and that the second section is not tangential to the curved flow section. The examiner respectfully disagrees. Yamarik's second section, i.e. tip cooling holes (58), are clearly dimensioned and oriented to enable the introduction of a borescope as would be evident to one of ordinary skill in the art. Further, as evidenced by DE 19801804 C2, it is known in the art of turbine blade inspection that borescopes are capable of introduction into small holes and are highly maneuverable so as to bend and twist as needed. Additionally, the section second of Yamarik's is clearly tangential to

the curved flow path, if for no other reason than the walls of Yamarik are identical to that of applicant's preferred embodiment.

In regard to the new claims, Applicant contends that the arrangement of walls in the preferred embodiment is different from those disclosed by Yamarik. The examiner respectfully disagrees. The cross-sectional views of both Yamarik and applicant's invention are identical except for the use of Yamarik's guide vane (54). Contrary to Applicant's assertion the use of this vane does not interfere with the inertial force utilized to separate the particles from the primary flow, since the guide vane is not extend into the area of the first passage (36). Also, Yamarik's second section would provide a straight line of sight to the second section, i.e. top wall, of second wall.

Claim Objections

Claim 22 is objected to because of the following informalities:

The use of a second wall in claim 22 is inconstant with the arrangement of the other claims. Specifically, the second wall of claim 22 defines the second section and the second portion. However, in the other claims the third wall is common to both the second section and second portion.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.


Claims 3,16 and 22-28 are rejected under 35 U.S.C. 102(b) as being anticipated by Yamarik et al. (4,278,400), hereinafter "Yamarik". Yamarik discloses a rotating blade (of a turbine having a coolant passage with a curved flow section (36,38) in a first flow direction and a second passage (56) parallel to the axis of the turbine and branching off the coolant passage at tangentially to the curved flow section. The second passage is arranged in the neighborhood of the blade tip and extends to the trailing edge of the blade. Further, the second passage is capable of both acting as a dust discharge aperture, due to its tangential relationship with the curved passage and its radially outward location, as well as allowing for the introduction of a borescope therethrough. The second passage (58) acts as a dust removal passage due to the inertial effects of the rotation of the blades on the relatively high mass dust particles separating these particles in the curved flow section while the main coolant flow turns radially inward to the second section. Further, Yamarik's blade includes a first section (36) which flow toward the curved flow section, a second passage (58) flowing tangentially away from the curved section, and a second section (26) flowing away from the curved section. A first wall (34) defined the first and second sections. A second wall includes a first portion (22) defining the first section and a second portion (16) defining the second passage (56). A third wall includes a first portion (28) defining the second section and parallel to the first wall (34) and a second portion defining the second passage. Additionally, there would be a straight line of sight through the second passage to the second section (16) of the second wall.


Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nathan Wiehe whose telephone number is (571)272-8648. The examiner can normally be reached on Mon.-Thur. and alternate Fri., 7am-4:30pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward Look can be reached on (571)272-4820. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


Nathan Wiehe
Examiner
Art Unit 3745


EDWARD K. LOOK
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 3700
12/13/07